

Title (en)
Muffler.

Title (de)
Schalldämpfer.

Title (fr)
Dispositif d'insonorisation.

Publication
EP 0219218 A1 19870422 (EN)

Application
EP 86306862 A 19860905

Priority
US 77283185 A 19850905

Abstract (en)
A muffler for attenuating core and turbine noise generated by a gas turbine engine is in the form of a housing (30) of rectangular section spaced from and surrounding a duct (16) defining a flow passage for the exhaust gases from the engine. The enclosed space around the duct and within the housing is divided into a number of acoustic attenuators with opposite sides of the duct each containing a reactive attenuator chamber (40, 42) and a resonant attenuator chamber (48, 50) within the first chamber at the downstream end. Opposite sides of the duct are perforated (44, 46) to provide acoustic communication between the passage on the one hand, and the downstream end of the reactive duct and the whole length of the resonant duct on the other hand. The reactive duct is a closed cavity whose dimensions and shape determine its acoustic characteristics while the resonant duct is in the form of a number of individual attenuating cells (54, 60). The four attenuators are designed to attenuate sound primarily at different frequencies so that frequencies over a fairly wide range can be attenuated by a single muffler of compact construction. The reactive attenuators are designed to attenuate engine core noise while the resonant attenuators are designed to attenuate turbine noise.

IPC 1-7
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IPC 8 full level
F01N 1/02 (2006.01); **F01N 1/04** (2006.01); **F01N 1/24** (2006.01); **F02C 7/24** (2006.01); **F02K 1/82** (2006.01); **G10K 11/172** (2006.01)

CPC (source: EP US)
F02C 7/24 (2013.01 - EP US); **F02K 1/827** (2013.01 - EP US); **G10K 11/172** (2013.01 - EP US)

Citation (search report)
• [X] DE 753765 C 19510726 - EBERSPAECHER J
• [X] DE 976032 C 19630124 - EBERSPAECHER J
• [X] US 4371054 A 19830201 - WIRT LESLIE S
• [A] US 4128769 A 19781205 - BONS ROBERT, et al
• [A] US 3212603 A 19651019 - WALKER JOHN C
• [A] FR 2317504 A1 19770204 - SHORT BROTHERS & HARLAND LTD [GB]
• [A] US 3437173 A 19690408 - EHRICH FREDRIC FRANKLIN
• [A] FR 2356820 A1 19780127 - GEN ELECTRIC [US]
• [A] GB 2038410 A 19800723 - ROLLS ROYCE
• [A] FR 2283322 A1 19760326 - GEN ELECTRIC [US]
• [A] US 4235303 A 19801125 - DHOORE LOUIS G [US], et al

Cited by
GB2237323A; EP2172716A3; EP0591154A4; US8240427B2

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